

### Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

### **Listing of Claims:**

1-15. (Canceled)

16. (Currently Amended) A method for preferentially inhibiting proliferation of genetically engineered T cells in an animal containing them, wherein the genetically engineered T cells include a nucleic acid encoding a mutated macrolide binding protein (MBP) selected from an FK506-binding protein (FKBP), cyclophilin, calcineurin, and FKBP:rapamycin associated protein (FRAP), which method comprises:

- (i) ~~introducing into the animal, genetically engineered T cells which include a nucleic acid encoding the mutated MBP, and~~
- (ii) ~~administering to the animal a macrolide which binds to the mutated MBP or forms a complex including the mutated MBP, and which inhibits proliferation of T cells expressing the mutated MBP,~~

wherein, relative to the wild-type MBP, the mutated MBP contains an altered amino acid sequence and has an altered specificity for binding to or forming a complex with a macrolide.

17. (Canceled)

18. (Previously presented) The method of claim 16, wherein the macrolide binds to or forms a complex with the mutated MBP with a dissociation constant,  $K_d$ , at least one order of magnitude less than its  $K_d$  for binding to or forming a complex with wild-type MBP.

19. (Previously presented) The method of claim 16, wherein the macrolide binds to or forms a complex with the mutated MBP with a dissociation constant,  $K_d$ , at least three orders of magnitude less than its  $K_d$  for binding to or forming a complex with wild-type MBP.

20. (Previously presented) The method of claim 16, wherein the nucleic acid was introduced into the cell *ex vivo* by DNA transfection.



21. (Previously presented) The method of claim 16, wherein the nucleic acid was introduced into the cell *ex vivo* by virus-mediated transduction.
22. (Previously presented) The method of claim 16, wherein the nucleic acid was introduced into the cell *ex vivo* by homologous recombination.
23. (Previously presented) The method of claim 16, wherein the macrolide is an analog of rapamycin, FK506 or cyclosporin.
24. (Previously presented) The method of claim 16, wherein the animal is a mammal.
25. (Previously presented) The method of claim 24, wherein the animal is a human.
26. (Previously presented) The method of claim 16, wherein the introduced T cells are autologous, allogeneic or xenogeneic to the animal.
- 27-28. (Canceled)
29. (Previously presented) The method of claim 16, wherein the expression of the mutated nucleic acid is transcriptionally regulated by a T-cell specific transcriptional regulatory sequence.
- 30-38. (Canceled)
39. (Currently amended) A method for providing an animal which contains T cells, the proliferation of which may be preferentially inhibited, the method comprising introducing into said animal T cells containing a nucleic acid encoding a mutated macrolide binding protein (MBP), wherein
  - (a) the MBP is selected from an FK506-binding protein (FKBP), cyclophilin, calcineurin, and FKBP:rapamycin associated protein (FRAP);
  - (b) relative to the wild-type MBP, the mutated MBP contains an altered amino acid sequence compared with the amino acid sequence of the MBP, and preferentially has an altered specificity for binding to or forming a complex with a macrolide; and
  - ~~(c) the macrolide which inhibits proliferation of T cells expressing the mutated MBP,~~~~the method comprising introducing into said animal the cells of claim 36.~~
- 40-45. (Canceled)